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29

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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/646,349 | 01/03/2001 | Hironao Okayama | OKAYAMA2 | 9117 |
| 1444 | 7590 | 04/20/2004 | EXAMINER | |
| BROWDY AND NEIMARK, P.L.L.C. 624 NINTH STREET, NW SUITE 300 WASHINGTON, DC 20001-5303 | | | YUN, JURIE | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2882 | |

DATE MAILED: 04/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 09/646,349 | Applicant(s) OKAYAMA ET AL. <i>lu</i> | |
| | Examiner Jurie Yun | Art Unit 2882 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 29 March 2004.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 3-10 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 4-8 and 10 is/are allowed.
- 6) Claim(s) 3 and 9 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed 3/29/04 has been entered.
2. The previously cited objections to claims 3, 4, and 6 have been withdrawn, however, there is a new objection to claim 3 cited below.

Claim Objections

3. Claim 3 is objected to because of the following informalities: there is lack of antecedent basis for "the low carbon steel *sheet*" in lines 4-5. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, because the limitations conveyed by "...the improvement wherein said low carbon steel consists of, in addition to *usual* components for low carbon steel..." are not clear. The specification does not define what the "usual" components are for low carbon steel.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 3 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Kiyoshi et al. (JP 08-333654).

8. With respect to claims 3 and 9, Kiyoshi et al. disclose in a method of producing a material for an aperture grille for use in a color picture tube (see Industrial Application), comprising providing a low carbon steel sheet; cold-rolling the low carbon steel sheet; and annealing the low carbon sheet; the improvement wherein said low carbon steel consists of, in addition to usual components for low carbon steel, 9 to 30 wt% of Ni, said cold-rolling is at a reduction rate of not less than 60%, and said annealing is at a temperature of 400 to 500 degrees Celsius (see Abstract). The Ni content is 26-52%, which includes 9-30 wt% as claimed; the reduction rate is 15-80%, which also includes "not less than 60%". The various ranges disclosed by Kiyoshi et al. are included in the ranges as claimed. Also, see paragraphs 0018-0020 regarding shadow mask, and particularly paragraph 0020.

Response to Arguments

9. Applicant's arguments filed 3/29/04 have been fully considered but they are not persuasive. Applicant's state Kiyoshi et al. disclose tin in the composition of low carbon steel sheet. This statement is not denied. However, the newly added limitation, in claim 3, citing "in addition to usual components for low carbon steel" does not preclude the use of tin. While applicant's state that tin is not a usual component for a low carbon steel sheet, neither the claim nor the specification define what is considered to constitute the "usual" components of low carbon steel sheet. Further, Applicant's have provided no evidence to support this assertion. Consequently, this argument is not persuasive.

Allowable Subject Matter

10. Claims 4-8 and 10 are allowed.

11. The following is a statement of reasons for the indication of allowable subject matter: Prior art fails to disclose a method of producing a material for an aperture grille for use in a color picture tube, comprising providing a low carbon steel sheet consisting of Fe, C, wherein said C is present in an amount no greater than 0.01 wt%, up to 0.5 wt% Mn, up to 0.3 wt% Si, up to 0.01 wt% S and N, 9 to 30 wt% of Ni and 0.1 to 5 wt% of Co; cold-rolling the low carbon steel sheet at a reduction rate of not less than 60%; and annealing the low carbon steel sheet at a temperature of 400 to 500 degrees Celsius, as claimed in claim 4.

Prior art fails to disclose a method of producing a material for an aperture grille for use in a color picture tube, comprising providing a low carbon steel sheet containing 9 to 30 wt% of Ni and being substantially free of tin; annealing the low carbon steel sheet at a temperature of 500 to 800 degrees Celsius; subjecting the low carbon steel sheet to cold-rolling at a reduction rate not less than 60%; and annealing the low carbon steel sheet at a temperature of 400 to 500 degrees Celsius, as claimed in claim 5.

Prior art fails to disclose a method of producing a material for an aperture grille for use in a color picture tube, comprising providing a low carbon steel sheet containing 9 to 30 wt% of Ni and 0.1 to 5 wt% of Co, and being substantially free of tin; annealing the low carbon steel sheet at a temperature of 500 to 800 degrees Celsius; cold-rolling the low carbon steel sheet at a reduction rate of not less than 60%; and annealing the

low carbon steel sheet at a temperature of 400 to 500 degrees Celsius, as claimed in claim 6.

Conclusion


12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jurie Yun whose telephone number is 571 272-2497. The examiner can normally be reached on Monday-Friday 8:30-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on 571 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jurie Yun
April 15, 2004



EDWARD J. GLICK
SUPERVISORY PATENT EXAMINER